

CHAPTER 5

TRANSPORTATION ELEMENT

INTRODUCTION

The Transportation Element must balance the needs of businesses, neighborhoods, schools, freight, industry, retailers, property owners, parks, subdivisions, airports, and the environment. No single sector of the community should dominate the entire transportation plan; however, each sector of the community can profit by achieving a balanced transportation system.

Policies of the Transportation Element are intended to:

- improve mobility with a focus on people and goods, instead of automobiles;
- limit roadway widening (especially in neighborhoods that are bisected by the arterial network);
- improve the pedestrian and bicycle non-motorized network;
- improve pedestrian and bike safety and mobility;
- establish funding priorities with respect to preservation, maintenance, mobility, and safety of transportation facilities;
- enhance access controls on the arterial system in order to improve mobility and safety;
- improve the coordination and working partnerships with other jurisdictions; and,
- enhance circulation and cross-circulation opportunities to reduce congestion on the arterial system.

By law, the Transportation Element must implement and be consistent with other elements of the 20-Year Plan. The policies and LOS standards contained within this element complement the Land Use Element by providing for transportation needs and infrastructure in urban centers, addressing the needs of neighborhoods and adapting the rural transportation system in support of those policies. This element also integrates the goals and directions of the Housing (Chapter 2) and Economic Development (Chapter 9) Elements as well as minimizing the environmental impact of transportation systems.

GMA REQUIREMENTS

The State of Washington's 1990 Growth Management Act (GMA) and amendments mandate the inclusion of a Transportation Element in the Comprehensive Plan. Although the GMA has some very specific requirements, flexibility is written into the law so that each County can tailor its plan to its community goals. Key aspects of the GMA regarding transportation elements include:

- consideration of many types of transportation (air, water, rail, and land--including roadways, transit, ferries, non-motorized, and freight);

- recognition of RCW 47.06.140 which defines transportation features and services of statewide significance, and state-adopted levels of service on roadway facilities;
- recognition and inclusion of highways of regional significance with a regionally designated level of service;
- adoption of LOS standards for both arterials and transit routes (see LOS section);
- flexibility in establishing levels of service to address desired land use goals;
- consistency with County-wide and regional transportation plans is required;
- provision of adequate transportation service concurrent with (or within three years of) development; and,
- internal consistency of all elements in the Comprehensive Plan, and particularly the Land Use and Transportation Elements.

PROCESS

The Transportation Element was developed from a number of cooperative transportation planning efforts in the County. The Community Framework Plan provides County-wide transportation policies to guide the County and its municipalities with the development of their comprehensive plans and transportation elements. The Metropolitan Transportation Plan for Clark County (Dec. 2002), prepared by the Regional Transportation Council (RTC), provides the regional framework consistent with transportation planning in the Portland metropolitan region. RTC conducts transportation modeling for Clark County. The State Highway System Plan 2003-2022 (Feb. 2002) provides guidance on the planned improvements and funding available for those identified projects. Policies from other planning documents such as the Clark County Trails and Bikeway System Plan, December 1992, have been incorporated into this element. In addition, Clark County has worked with each city in a partnership planning process to develop a coordinated transportation and land use plan for each urban area.

The process of forming this element was as follows:

- Determine existing deficiencies and their cost. The County is required to correct these problems. Once corrected, future problems will be primarily the responsibility of the development that causes them.
- Determine the community's vision of the desired transportation system. An extensive process of open houses, surveys, public forums, etc., was used to define the community's vision.
- Set LOS standards to implement the vision.
- Use proposed land use patterns to forecast future travel demand.
- Identify future projects needed to maintain adopted levels of service.
- Determine if the County can afford the projects through grants, traffic impact fees, etc. If not, revert to step 3 and revise LOS standards.

The Transportation Element consists of the following sections:

Transportation Facilities

This section contains an overall review of transportation facilities such as roads, transit, bikeway, aviation, etc. The review included the existing condition of the facilities, future expectations, and implementing/financial strategies to accommodate future growth. The final analysis, most importantly, outlines how the transportation element will be implemented once adopted and provide a system for ensuring concurrency.

Level of Service

Level of Service (LOS) standards for arterials set goals for the maximum amount of congestion tolerated on the roadway. LOS standards are used to identify existing and future deficiencies.

Concurrency

This section outlines the process that the County will use to ensure sufficient infrastructure is in place within six years of development as required by the GMA. The County has opted to use a three-year standard

Policies and Strategies

A comprehensive set of policies to guide the implementation of this element is defined in this section.

Financial Analysis

A multi-year analysis of funding capability balancing the needs identified in this chapter against probable resources.

TRANSPORTATION FACILITIES: ROADS

The GMA requires an inventory of existing conditions for specific modes of transportation (Figure 16). This section summarizes those studies. LOS standards and concurrency are addressed separately. The supporting document lists existing and future roadway capacity deficiencies (see Appendix A). The Board adopted these through Ordinance No. 2000-10-03.

Functional Classification

Highways, roads, and streets are classified into groups having similar characteristics for providing mobility and/or access. The functional classification also dictates the design standards of roadways. Table 5.1 illustrates a comparative inventory of the mileage for each classified roadway type per area and its proportional share of the entire roadway system in Clark County.

- The County's arterial functional classification and the expected 20-year roadway cross-sections for each roadway in the County's jurisdiction is provided in the adopted Arterial Atlas. The information provided in that document for the County arterial roadways represents the County's adopted policy with respect to how the individual roadways are classified into the system described in this section of the Comprehensive Plan.¹

¹ The county's Arterial Atlas classification system differs from the Federal Functional Classification system.

**Table 5.1 Federal Functional Classification of Mileage
of Clark County's Classified and Local Roads, 1993**

FACILITY TYPE	VANCOUVER URBAN AREA	CAMAS URBAN AREA	RURAL REMAINDER OF COUNTY	TOTAL CLARK COUNTY	PERCENT OF TOTAL
INTERSTATES	22.1	0.0	9.2	31.4	2%
EXPRESSWAYS & PRINCIPALS	78.2	11.5	14.2	103.9	4%
MINOR ARTERIALS	94.5	24.1	19.7	138.3	5.3%
URBAN COLLECTORS & RURAL MAJOR COLLECTORS	133.2	16.0	204.4	353.5	13.6%
RURAL MINOR COLLECTORS	0.0	0.0	143.1	143.1	5.5%
LOCAL ROADS	625.8	71.3	1136.3	1833.4	70.4%
TOTAL	953.8	123.0	1526.9	2603.6	100.0%

Note: does not include proposed future roads. Source: Washington State Department of Transportation.

- **Interstate Routes:** Interstate routes (such as I-5 and I-205) are designed to provide for the highest degree of mobility serving large volumes of long-distance traffic; they are not designed to provide access to land uses.
- **State Routes:** State routes (such as SR-14, SR 501, SR-503) serve large volumes of traffic between counties or regions.
- **Urban Principal Parkway Arterials** such as the Padden Parkway and NE/SE 192nd Avenue are the highest classification within the County's functional system. They carry high volumes of traffic through the urban area and between major activity centers of regional impact. Access is normally limited to intersections with other arterials. Direct land access is prohibited.
- **Urban Principal Arterials:** Urban principal arterials (such as NE 78th Street or NE Fourth Plain Road) permit traffic flow through the urban area and between major elements of the urban area. They are of great importance in the regional transportation system as they connect major traffic generators to other major activity centers and carry a high proportion of the total urban area travel on a minimum of roadway mileage.
- **Urban Minor Arterials:** Urban minor arterials (such as Hazel Dell Avenue or NE 99th Street) collect and distribute traffic from principal arterials to streets of lower classifications or allow for traffic to directly access destinations. Access to land use activities is generally permitted.
- **Urban Collectors:** Urban collectors (such as NE 88th Street) provide for land access and traffic circulation within and between residential neighborhoods and commercial and industrial areas. Collectors do not handle long through trips and are not continuous for any great length.
- **Urban Local Streets:** Urban local streets emphasize access to land uses versus mobility and usually do not contain bus routes.
- **Rural Major Arterials:** Rural major arterials consist of a connected rural network of continuous routes. They provide the highest degree of mobility, serve

major centers of activity, and are the highest traffic volume corridors between suburban centers and larger communities. They may be portions of rural major collectors that warrant redesignation along sections of the roadway where there are conditions such as congested intersections with state highways or urban principal arterials or where safety conditions would be mitigated by additional roadway width or other design features. Land access should be limited to the lower classification roadway only. Portions of La Center Road and NE 72nd Avenue fit this designation.

- **Rural Major Collectors:** Rural major collectors (e.g. NW Hillhurst Road or NE 179th Street) are extensions of urban principal arterials and some urban minor arterials into rural areas.
- **Rural Minor Collectors:** Rural minor collectors (e.g. NE Kelly Road) are rural extensions of urban collectors and some urban minor arterials.

EXISTING TRAFFIC VOLUMES

Clark County has seen significant growth in traffic volumes in recent years as a result of socio-economic and demographic changes. Congestion at most intersections reflects the increases in traffic volumes on the roadway segments.

EXISTING DEFICIENCIES

Some roadways and intersections do not meet the proposed LOS standards contained in this element. Where those deficiencies exist on the county's system, the County is committed to eventually correcting them.

County deficiencies are located on the following roadways:

- Salmon Creek area at NE 134th street and
- NE Andresen Road north of SR500 in the vicinity of Westfield Shopping Center at Vancouver.

Existing deficiencies are found predominantly on the major state highways in the Vancouver urban area on the following existing roadways:

- SR-500 in the vicinity of the Westfield Shopping Center at Vancouver and I-205 and
- East Mill Plain Boulevard near I-205.

The I-5 crossing over the Columbia River is currently operating at LOS E/F. In the future, alternative modes of transportation, such as transit, HOV, or high-capacity transit (HCT) may be needed to improve the carrying capacity of the I-5 and I-205 bridges without expanding or replacing them (Figure 17).

Signalized Intersections

Several key intersections experienced poor levels of service in 2002, particularly during the peak afternoon period when commute trips are joined by shopping, school, and other non-commute trips. There are several signalized intersections in Clark County that operate at or near deficient levels of service. These intersections are included in the County's traffic impact fee (TIF) program that is designed to ensure that new development

does not cause an intersection to exceed LOS standards or aggravate existing traffic problems.

TRAVEL DEMAND FORECASTING

The Southwest Washington Regional Transportation Council (RTC) used a computerized model based on the proposed land use patterns to project future traffic volumes. The study year for analysis of future conditions is 2023. Base conditions for the 2023 analysis scenarios consist of funded or committed transportation projects, and 2023 population and employment forecasts. The programmed projects are coded into the transportation network and establish a no-action scenario for the future transportation conditions.

Travel demand has also grown as the number of registered passenger cars in Clark County has increased dramatically over the last three decades. Between 1990 and 2000 there was a 268 percent increase in population in Clark County while during the same time there was a 67.2 percent increase in both registered passenger cars and light trucks (which includes SUVs).

FUTURE DEFICIENCIES

Using capacity analysis and LOS standards (see section on LOS), the RTC, Clark County and municipal planning staff have identified future deficiencies in the regional transportation system based on the urban growth concept and an assumed roadway network for 2023. The assumed network is the existing network with improvements identified in the transportation improvement programs of the various jurisdictions and projects for which there is an identified regional need, strong regional commitment, and probable funding available. The 6-year Transportation Improvement Plan (TIP) is updated and adopted on an annual basis (Figure 18).

TRANSIT

C-TRAN is a publicly funded transportation system that serves the transportation needs of Clark County with connections to Portland, Oregon. C-TRAN's existing transit facilities fall into one of two general categories: current services, and capital facilities and resources. Current services are discussed below.

Fixed Route Services

As of August 2003, C-TRAN operated approximately 160 vehicles on two rural, sixteen urban, and eight commuter bus routes as well as in its paratransit and vanpool programs. Services hours are generally from 5:30 AM to 9:30 PM on weekdays and 6:45 AM to 8:00 PM on Saturdays, and 8:00 AM to 7:00 PM on Sundays and holidays. As part of its commuter services, C-TRAN also connects directly to Tri-Met's downtown Portland transit mall and the MAX light rail system at the Parkrose/Sumner Transit Center. These access points allow C-TRAN passengers to reach destinations in the Portland metropolitan area, including Portland International Airport. Almost 6.4 million fixed route passengers were served in 2002, traveling over 30 million passenger miles.

Alternative Transportation Services

In addition to traditional fixed routes, C-TRAN also provides a variety of other transportation services to the community:

- Paratransit: C-TRAN's paratransit bus service exceeds publication Americans with Disabilities Act requirements for Paratransit Service. C-VAN provides wheelchair accessible, curb-to-curb services in much of Clark County for elderly and disabled persons who cannot use fixed-route services.
- Vanpools: C-TRAN administers and promotes vanpools to provide another commute alternative to persons living or working in Clark County.

- Transit Centers and Park and Ride Facilities: C-TRAN operates three transit centers: Vancouver Mall, Seventh Street in downtown Vancouver, and Fisher's Landing Transit Center in East County. C-TRAN also operates five park-and-ride lots providing over 1,000 parking spaces and direct access to express commuter services and local routes. A 1995 analysis projected demand for 3,000 park-and-ride spaces in the I-5 corridor and 2,300 spaces in the I-205 corridor by the year 2015. A new transit center on 99th Street and I-5 is scheduled to open in Fall 2004 providing 600 additional park-and-ride spaces. In addition, the agency is working with local and state jurisdictions to preserve or replace existing park and ride capacity near 134th Street given the possibility of future interchange improvements that could displace the existing 436-space Salmon Creek Park & Ride.



- Commute Trip Reduction (CTR): In cooperation with local jurisdictions, C-TRAN is providing a variety of support services to local employers required to meet state-legislated Commute Trip Reduction goals.
- Ridematching: C-TRAN has partnered with the City of Portland, Tri-Met, SMART and other public agencies in promoting the bi-state interactive carpool matching website, www.CarpoolMatchNW.org.
- Planning: C-TRAN continues to partner with regional jurisdictions and agencies in order to respond to projected travel demand in an efficient and cost-effective manner.

Future Conditions

In response to revenue reductions prompted by the passage of Initiative 695, substantial reductions of services were implemented in July 2000. These reductions included the elimination of some services, major reorganization of most of the urban service base, and a severe reduction in weekday service. Based on C-TRAN's 2003-2009 Transit Development Plan (TDP), it is anticipated that annual fixed route service hours will decrease more than 35 percent from 280,084 hours in 2003 to 183,576 hours in 2006 without additional funding revenues to make up for the loss of the Motor Vehicle Excise tax funding.

Future transit service will be shaped by funding capability and community demand. In order to identify the level of transit services the public is willing to support, C-TRAN is developing a 20-year Strategic Plan that will address transit resources, system efficiencies and the desired mix of services to meet the growing community demand for public transportation. This plan will incorporate local jurisdictional standards with transit-related improvements. The final plan will contain both a six-year implementation program and a 20-year vision plan.

As part of the GMA implementation, a joint development review process has institutionalize C-TRAN's participation in the development review process for SEPA, land use, zoning, development permitting, and site plan review. The program applies to transportation corridors, major centers, secondary centers and other significant transportation linkages.

HIGH CAPACITY TRANSIT (HCT)

Starting prior to the adoption of the 1994 Comprehensive Plan and continuing until shortly after its adoption, regional and local jurisdictions from Oregon and Clark County, participated in a high capacity transit study to determine what HCT systems are needed to: (1) adequately address expected future travel demand in the Clark County-Portland region, (2) identify land use scenarios supportive of high capacity transit systems, and (3) determine the potential for coordination of services within the Vancouver-Portland region. That study was entitled, "South/North Corridor Study". At the end of the Tier I, South/North Alternatives Analysis Study, a light rail transit (LRT) system was identified as the high capacity transit mode of choice.

Light rail was chosen at that time as the preferred mode for several reasons:

- it promotes desired land use patterns and development through its support of activity centers and bi-state policies;
- it provides high quality transit service, effective transit system operation, and future expansion capability; and,
- it provides for a fiscally stable and efficient transit system and maximizes efficiency and environmental sensitivity.

Light rail transit provides high quality transit service through ease of access, transferability, fast travel times, good reliability, and high ridership. Improved bus feeder service coordinated with transit centers would simplify and centralize transfers providing for accessibility throughout the transit system. Transfers from bus routes could be easily accommodated at station locations.

Light rail service in Clark County would provide more convenient, reliable service for people traveling inside Clark County as well as those traveling to destinations in Oregon. C-

TRAN buses would provide access to this regional HCT system. Transit centers would be located to make reaching the high capacity transit system easy for pedestrians, bicyclists, bus riders, and automobile drivers/ passengers. These transit centers would serve as intermodal facilities, allowing people to make connections between different modes of transportation.

A joint environmental review was conducted of the preferred alternative for an LRT alignment that would serve the Clark College area near Downtown Vancouver as its minimum operating segment. Extensions of the line either along the SR500 or the I-5 corridors were considered. The preferred alternative from that environmental analysis was packaged as a project and presented to the voters of the transit benefit district for consideration as an increase in the sales tax funding, in February 1995. That request for funding was defeated by the voters.

The most recent examination of this issue of high capacity transit and high capacity transit mode selection (LRT, buses, commuter rail) has been conducted through the establishment of a citizen-elected official task force appointed jointly by the Governors of Washington (Gary Locke) and Oregon (then John Kitzhaber). The Task Force was appointed to examine options for addressing trade and transportation issues in the bi-state I-5 corridor from the Rose Garden area of Portland to the I-5/I-205 confluence in the Salmon Creek area of Clark County.

This citizen-business-elected official task force issued its recommendations for a strategic plan for this corridor in June 2002. In that list of recommendations is consideration for an LRT loop that would serve Clark County via the I-5, I-205 and either the Fourth Plain Boulevard/SR500 corridors. For the most part, this proposed LRT loop is entirely within the existing city limits of Vancouver. Many of the policies contained in this Transportation Element are necessary for successful HCT implementation, but they are not reliant upon an HCT system being constructed.

HIGH SPEED RAIL

In 1991, the Washington State Legislature directed that an assessment of high speed ground transportation be conducted due to the increasing congestion along major transportation corridors serving intercity routes. High speed rail systems, using a variety of technologies, are in service in Japan, France, Germany and Sweden and appear well used. There are no high speed rail systems currently operating in the United States.

The study was not meant to focus on the technologies but rather on the economic, environmental, institutional and financial feasibility of implementation. Two major corridors were identified and analyzed: a north-south route serving Portland, Oregon through Seattle to Vancouver, BC, and an east-west route serving SeaTac through Moses Lake to Spokane. Preliminary findings indicated that as much as ten percent of all vehicular and air travel between Seattle and Portland might be captured by a high speed system.

The study recommended implementing high speed rail in three stages:

- incrementally construct and modify a system between Everett and Portland, Oregon with a 150 mph or greater top speed by the year 2020;
- construct a system between Everett and Vancouver, BC; and,
- construct a system between King County and Spokane.

If such a system were constructed, it would directly impact Clark County. Implementation of a true high speed rail system would require total separation from existing freight rail, elimination of at-grade crossings, acquiring new rights-of-way, and ensuring the potential for electrification of the system.

FREIGHT

Truck freight movement is essential to the continued economic vitality of Clark County. However, some of the by-products of increased truck traffic include, noise, vibration, pollution, etc., which may often conflict with residential quality of life.

Truck Movement

RTC completed a freight mobility study, the Southwest Washington Regional Freight Transportation Study, in September 1993. The report reviewed freight transportation issues and needs, evaluated freight transportation movement in the region, and compiled available data on freight transportation. A summary of the existing conditions is described below.

Clark County has designated all roadways classified as arterials or above and located within urban areas as truck routes. In rural areas, the County has designated all of its collector facilities and above as truck routes. The County has placed restrictions on selected sections of the County system where pavement conditions require weight limits. The inventory of restricted sections is updated annually, and restrictions are removed from the list once the surface has been upgraded. Washington State Department of Transportation (WSDOT) has designated all of its state roadways as truck routes and has few weight or height restrictions on these facilities. Freight mobility on Interstate 5 and Interstate 205 is especially important for through freight movements and are a critical link in north-south freight movements on the entire West Coast between Canada and Mexico. In addition, I-5 provides truck access to the Port of Vancouver and nearby industrial facilities. I-205 provides access for the high tech industries in east Clark County for air shipments from Portland International Airport.

Truck traffic within the urban area of Clark County is generally related to four activities:

- commercial and industrial site deliveries;
- solid waste disposal;
- resource extraction industries (rock quarrying and logging); and
- construction activity.

Most of the freight truck activity occurs between 6:00 AM and 4:00 PM with the highest truck traffic volumes found near midday. During the morning peak traffic period (AM peak) trucks account for approximately 5 to 10 percent of the total traffic volume on primary truck routes. During the evening peak traffic period (PM peak) the volume of truck traffic generally decreases and accounts for less than 5 percent of the total traffic.

Future Conditions

An adequate level of mobility should be maintained for goods movement in Clark County and the Vancouver-Portland metropolitan area as a whole to sustain the economic activity of the metropolitan region and the States of Washington and Oregon. As traffic congestion continues to increase in more locations and for longer periods, the freight

industry will experience longer shipping schedules and delays. This will likely increase the cost of transporting the goods. Of particular concern is the I-5 bridge over the Columbia River, which is already operating at capacity. In addition, the long queues of traffic resulting from congestion on I-5 could block truck access to downtown Vancouver and the Port of Vancouver. The budget constraints at the federal, state, and local levels of government will limit the amount of funding for roadway improvements including those for upgrading pavement conditions on restricted truck routes. This will place more of a burden on the remaining truck route system.

The movement of goods by truck and rail was a significant area of interest in the technical work supporting the I-5 Transportation and Trade Partnership Strategic Plan. An examination of the I-5 corridor under projected 2020 peak traffic conditions with known, funded transportation improvements indicates that the value of truck delay will increase by 140% from \$14.1 million in 2000 to \$34 million in 2020. Assuming that all of the known, but unfunded, improvements could be in place by 2020, only reduces that increase in delay by 52%. The Strategic Plan calls for improvements to the transportation system to preserve the capacity of the corridor for freight movement.

There are measures that can be implemented for short and long-term planning for preserving an adequate level of freight mobility as identified in the RTC freight transportation study and the I-5 Trade and Transportation Partnership Strategic Plan. While freight is essential to the continued operation of our society, its by-products of increased truck traffic, noise, vibration, pollution, etc., often conflict with residential quality of life.

RAIL

Rail service in Clark County is operated by the Burlington Northern Santa Fe Railroad (BNSF), AMTRAK, the Union Pacific Railroad (UP), the Lewis and Clark Railway Company (LINC), and the Battle Ground, Yacolt, and Chelatchie Prairie Railroad Association (BYCX). These operators provide either passenger or freight service as described below.

- **Burlington Northern and Santa Fe Railroad (BNSF)** operates freight service 365 days a year in Clark County. All BNSF trains in Clark County are dispatched from Seattle. BNSF maintains and operates the Vancouver rail yard, which serves as the primary classification yard for the Portland-Vancouver metropolitan area. This facility contains 35 miles of track with a holding capacity of 1,500 rail cars. Overflow from BNSF tracks can be accommodated by the Port of Vancouver, which maintains supplementary holding tracks. The BNSF Seattle/Vancouver line has two tracks, both in excellent condition, operating 75-80 trains daily in the corridor, consisting of BNSF, UPRR and Amtrak. The Vancouver to Spokane line is single track in excellent condition operating between 35 to 42 trains per day in the corridor. The Rye Branch is a short segment that diverges from the main line just north of 78th Street and runs from the mainline to Rye Yard off St John's Road. The track is in fair condition with tri-weekly service. This line was given to Clark County after the floods of 1996. The overall condition of BNSF's Clark County trackage is excellent. The speed limits on the BNSF mainline are not due to track condition, rather, at-grade crossings with arterial streets.

- Clark County Railroad** is owned by the County but leased to two different outside operators; the Chelatchie Prairie Railroad (BYCX) and the Lewis and Clark Railroad (LINC). The 30-mile line extends from the BNSF mainline in north Vancouver, diagonally through the County from the Rye yard to Chelatchie Prairie and offers both freight and passenger excursion services. The height of activity is between May and September when up to 16 excursion and 6 freight trains operate weekly. LINC serves freight customers on the "South Line" which is the line segment south of Battle Ground. Freight cargo deliveries of plasterboard, plastics, chemicals, and machinery are made to local industries. BYCX operates a passenger excursion program on the "North Line" which is north of Battle Ground. Special trips are made during the holiday season for Christmas trees.



- AMTRAK** has an agreement with BNSF to operate passenger service on the freight carrier's rail lines. AMTRAK operates passenger and parcel service 365 days a year throughout Clark County. Twelve daily AMTRAK trains serve Vancouver. The Empire Builder travels between Seattle and Chicago via Portland, Oregon; the Coast Starlight travels between Seattle and Los Angeles, via Portland, Oregon; and the Cascades travels between Vancouver, BC and Eugene, OR. An average of 5,274 passengers per month pass through the Clark County station. The overall condition of AMTRAK's facilities is good. In addition, a proposed high speed rail system (previously mentioned) would provide 150 mph or greater service between Portland, Oregon and Vancouver, BC.
- Union Pacific Railroad** operates some freight trains to Tacoma and Seattle on BNSF's lines. Union Pacific Railroad is privately owned and operates freight service 365 days a year. Twenty trains per day run north from Vancouver through Woodland and up to the Seattle area.

PORT DISTRICTS

Clark County has three port districts: the Port of Vancouver, the Port of Camas-Washougal, and the Port of Ridgefield. Only the Port of Vancouver provides commercial waterborne shipping facilities.

- Port of Vancouver, USA**, created by Clark County taxpayers in 1912, is one of the major ports on the Pacific Coast. Located in the convenient hub of marine, rail, highway and air cargo transportation network, the Port of Vancouver currently has over 40 companies on port property. The port has over 1,000 acres of land available for expansion and development for heavy and light industry, manufacturing, distribution warehousing, research and business park uses.

- **Port of Camas/Washougal's** taxing district extends over 95 square miles of land with an industrial park, marina, airport, park and wildlife refuge. The 430-acre industrial park, located south of SR-14 by Index and 27th to 32nd Streets, has 34 industries, each of which employs between one and 170 people. The marina has moorage to accommodate 330 boats plus 25 additional slips for guests, two yacht clubs, and a boat launch. South of the industrial park is Capt. William Clark Park at Cottonwood Beach. The Port district also operates Grove Field Airport (described in the following section).
- **Port of Ridgefield** was incorporated in 1940 to provide economic development to the greater Ridgefield area. The district covers 110 square miles with boundaries the same as those of the Ridgefield School District. The Port operates the Lake River Industrial Site adjacent to downtown Ridgefield. This property covers 40 acres and includes a public boat launch as well as canoe and kayak launch. The Port owns parcels of land at the I-5/Pioneer Street interchange that are available for development. Parcels; 5.7, 3, and 2 acres are zoned light industrial and fully served with utilities and sewer. The Port also owns 30 acres within the Ridgefield UGA northeast of the I-5/Pioneer Street interchange that is available for development of industrial/office flex buildings.

AVIATION

Airports and air transportation services are provided in the context of a complex set of federal, state, and local governmental regulations, and each level of government has a certain degree of control over parts of the air transportation system. The Federal Aviation Administration (FAA), deals primarily with issues of safety and air traffic control. The Washington State Department of Transportation's Aeronautics Division currently focuses primarily on general aviation airports and has some direct involvement with major passenger airports. Local jurisdictions (either city, county, or port district) influence land use and usually are the airport operating authorities.

There are three publicly-owned and seventeen privately-owned airfields operating in Clark County. The publicly owned fields are Pearson, Grove, and Woodland. The privately-owned fields which are available for public use are Goheen and Fly for Fun.

The National Plan of Integrated Airport Systems (NPIAS) and the State Aeronautics Division in the Washington State Airport System Plan (WSASP) categorize these airports as general aviation airports. Amphibian aircraft are allowed in the Columbia River and several area lakes. The Resource Document contains a description of each of the airfields in Clark County. Portland International Airport (PDX) is located in Portland, Oregon, to the southwest of the I-205 Glenn Jackson Bridge. This is a regional airport with domestic and international passenger and freight (cargo) service. Passenger airlines serving PDX include Air Canada, Alaska Airlines, America West, American, Continental, Delta, Frontier Hawaiian, Horizon, Lufthansa, Mexicana, Northwest, Skywest, Southwest, Sun Country, United and United Express. Cargo carriers serving PDX include Airborne, Air China, Kitty Hawk, AmeriFlight, BAX Global, Cargolux Airlines International, DHL Worldwide Express, Emery, Empire, Evergreen, Federal Express, and Korean Air.

An important example of an economic benefit that can be derived from airports is the ability to attract compatible land use developments (i.e., commercial or industrial) on or near airport property. In many instances, land immediately on or adjacent to an airport is flat, easily developed and relatively inexpensive when compared to more centrally located business district sites.

The Washington State Department of Transportation's Aviation Division, as well as local pilots' associations, have requested that an additional airport be sited in Clark County. In the late 1980's, a study was conducted to examine the feasibility of siting an airport in the Ridgefield Junction area. Public concern about the noise and traffic impacts of this airport resulted in not considering a new airport at that time.

A number of studies have been undertaken regarding airports, both specifically and generally in the last 20 years. An airport system plan was developed in 1984. Land use plans that incorporated airport issues were completed in 1979 (county-wide) and in 1987 (Ridgefield Subarea Plan) and 1988 (South County Subarea Plan). The February 2000 Clark County Airport Advisory Task Force Report concluded that there are inadequate general aviation capacity in the County and protection and preservation of existing facilities is needed. They report also stresses the need for two-way dialog with the Port of Portland and Oregon Department of Transportation as Clark County depends economically on proximity to Oregon airports.

While these plans identified the location of existing airports on the Comprehensive Plan and recommended certain land use regulations be considered to protect the airport activities from being compromised, County ordinances were specifically amended to address some of the identified concerns of the Task Force. Applicable federal and state laws affecting land use around airports have been followed.

One of the several requirements of the GMA is that the comprehensive plan of each jurisdiction should include a process for identifying and siting essential public facilities, including airports and state and regional transportation facilities.

The local planning authority and the airport sponsor should work together to ensure that the needs of both the local and aviation communities are met and compatible land uses are planned for the future. It is important for the County-wide 20-Year Plan to include the general aviation airports when planning long-term transportation improvements.

BICYCLE AND PEDESTRIAN SYSTEM

The provision of bicycle facilities in Clark County is becoming increasingly important as relatively few bicycle facilities exist. No current data exists on the number of bicyclists on the road on a daily basis but the number is considered to be increasing based on interest in wanting such facilities and recreational surveys. Greater emphasis is being placed on the design of roadways for bicycles. Clark County and other local jurisdictions have included bicycle and pedestrian elements in other plans or their comprehensive plans.

In September 1993, Clark County officially adopted the Trails and Bikeway System Plan, a plan for developing new bicycle and pedestrian facilities throughout the County. The System Plan was developed primarily by the Parks and Recreation Division of the Department of Public Works, with cooperation of the Transportation Division, and in the revised road standards adopted by Clark County and all its cities. Bicycling is allowed on all state routes in Clark County except for a portion of I-5 between the Columbia River Bridge and slightly north of the Mill Plain Boulevard interchange. However, there is no guarantee of the suitability of roadway conditions or fitness of any route for bicycling. On some facilities pedestrians and bicyclists must use the same paths creating potential conflicts.

C-TRAN began a Bike and Bus program in May of 1994. Easy-to-use bike racks are located on the front of all C-TRAN fixed route buses, accommodating up to two bicycles. In addition, bike racks or lockers are located at most park and ride facilities and transit centers.

Transportation policies are an extremely important component of the bicycle and pedestrian plan. It is more cost effective to incorporate the path at the time of initial construction if the roadway project policies provide the support and direction to plan and build facilities. The County currently has a Safe Walkways Task Force that has addressed transportation policy for the physically challenged. The Task Force done this by giving priority to those projects that to meet the Americans with Disabilities Act (ADA) requirements, wheelchair accessible transit service, social and/or health offices, or provide for improvements to mobility, such as wheelchair curb ramps at intersections.

TRANSPORTATION DEMAND MANAGEMENT (TDM)

Commute Trip Reduction (CTR)

The CTR law was passed as part of the Clean Air Act to ease traffic congestion, improve air quality and improve the general livability of communities. CTR is a statewide program asking employers to promote and facilitate the use of alternative modes to and from work. The CTR law focuses on work-related trips, where at least 100 employees travel to the work site in the morning peak traffic period. Trips made to and from the same location every day put the employer in a good position to market and promote a CTR program.

Where many programs demand rigorous physical system improvements with substantial financial commitments, the success of the CTR program is grounded instead in behavioral changes regarding the ways that people use transportation. Behavioral changes that individuals make to travel by carpool and vanpool, transit, bicycle, or foot can significantly affect conditions on the roadway and throughout the community, often at a fraction of the cost of many of the other system improvements.

Behavioral changes, of course, do not occur overnight or in a vacuum. The public demands cost effectiveness and convenience in their daily travel patterns. Public outreach and education is critical to the successes of the CTR concepts. It is through this educational program that the public will become advocates for a better transportation system, supporting a more responsive system in both speech and action. The goal of the CTR law is to reduce commute trips by 35 percent by 2005; this effort can certainly play a significant role in increasing the area's livability. C-TRAN has been given the lead role in CTR programs.

The key to successfully reaching CTR goals is the development of the site specific TDM programs and implementation measures. Typical TDM measures to reduce congestion include:

- transportation demand management, transit information centers at worksites;
- preferential high occupancy vehicle parking;
- transit subsidies;
- parking charge;
- ride match service; and,
- provision of bike racks and facilities for bicyclists

Parking

Parking policy, codes, and pricing have the most direct effect on commuting behavior and choice of modes for travel. Parking policy through the 1970s and into the 2000s concentrated on providing abundant off-street parking (both private and public) and closely monitoring available low cost on-street metered parking to attract business and encourage economic growth. While the parking programs today are much the same as they were 20 years ago in terms of attracting businesses, the means to this end are slightly different. Today, visions of mixed-use centers, higher density housing developments, and a pedestrian- friendly environment are being incorporated into the 20-Year Plan elements. Although parking has always been a hotly contested issue, especially for those individuals desiring to drive to their destination, parking policies of the past are at odds with current goals.

Livable neighborhoods and pedestrian friendly environments are critical to the success of alternative transportation opportunities such as transit, carpooling, bicycling, walking and even light rail. Where walkable and transit-friendly environments exist, the need for parking can actually decrease. The larger (in actual area) the transit friendly and walkable environment, the greater the potential decrease in parking demand. A decrease in parking can be realized only with a supporting and usable transit system, as well as pedestrian amenities. In the absence of such an environment, the demand for available parking will remain.

I-5 Transportation and Trade Partnership

This study examined the critical Interstate 5 (I-5) corridor from the Rose Quarter area of Portland, Oregon to the I-5/134th Street interchange in Clark County with a particular emphasis on the areas most influenced by the Columbia River crossing ("bridge influence area"). Among the recommendations from the bi-state citizen, business and elected official task force were several seeking greater system efficiency through demand and system management, including:

- Set final, acceptable, attainable and measurable targets for TDM/TSM in the I-5 corridor.
- As an interim measure, seek to increase the non-single occupant vehicle (non-SOV) share of cross-Colombian travel in the peak periods to 43 percent by 2020 from an existing estimate of 38 percent in 2000.
- As an interim measure, maintain mid-day average travel speeds in the I-5 corridor at 70% maximum posted limits to avoid peak spreading into the hours common to heavy truck movement.
- As an interim measure, reduce daily vehicle-miles-traveled (VMT) per capita for the urban areas of Clark, Multnomah, Clackamas and Washington Counties by 10 percent by 2020.
- As an interim measure, increase peak period travel reliability through the I-5 Corridor and major arterials by maintaining travel times for all vehicles.
- Increase commitment in the four-county region to TDM/TSM services by providing more funding to a range of TDM/TSM programs and projects.
- Increase support for transit services since additional transit service is the single most important investment necessary to achieve the TDM/TSM targets identified.
- Fund and conduct a regional TDM/TSM study and plan.

TRANSPORTATION SYSTEM MANAGEMENT

The term Transportation System Management (TSM) is applied to a wide range of transportation system improvements that tend to have low or no capital cost but address impediments to efficient operation of the transportation system. TSM measures can be applied on a spot or corridor basis. Clark County currently employs TSM measures to gain additional operational capacity on major arterial corridors. Active TSM measures in place include:

- corridor access management;
- channelization of traffic at intersections;
- traffic signal coordination; and,
- Intelligent Transportation System (ITS)

One of the most effective TSM measures is a program to address inappropriate land use access to arterial roadways. While new development is required to comply with the County transportation standards (CCC Chapter 40.350), existing land use on County arterials may have been permitted inappropriate access to those arterial roadways. The most efficacious approach to corridor-level access management is to address access issues when arterial capacity is expanded.

Another approach to TSM involves the identification of small capital improvements that can be demonstrated to add significantly to the capacity of an arterial. For example, at an intersection having a shared through and left-turn lane the traffic signal must be timed to separate that approach from the approach facing it (to allow for free flow of the left-turning traffic). The necessity of splitting that phase of the traffic signal timing creates an inefficiency, which could be removed if a separate left-turn lane is constructed.

A third approach, which is most applicable to high-volume roadways (e.g., Interstates and parkway arterials), is to provide incident management services in a single or series of corridors to address traffic management during incidents (e.g., vehicle collisions, breakdowns) so that such incidents are cleared quickly. Washington State Department of Transportation has a program to provide incident management patrols for the higher-volume state highways (I-5, I-205, SR-14).

Clark County uses traffic signal coordination systems to improve the operational efficiency of the regional transportation system in the following corridors:

- NE 134th Street (I-205 NB off-ramp to approximately NW 11th Avenue)
- NE 99th Street (NE Hazel Dell Avenue to Highway 99)
- NE 78th Street (NW 9th Avenue to NE St. Johns Road)
- Padden Parkway (NE Ward Road/NE 162nd intersection to NE 137th Avenue)
- NE Ward Road (NE 78th Street to NE 76th Street)²
- NE Fourth Plain Road (NE 102nd Avenue to the shopping center entrance signal at approximately NE 114th Avenue)
- NE Highway 99 (several separate systems – NE 129th Street to NE 134th Street, NE 117th Street to NE 88th Street, NE 78th Street to NE Ross Road in the City of Vancouver)
- NE 20th Avenue (NE 134th Street to NE 139th Street)

² The NE Ward Road system hardware exists but the system is not operational as of July 2002. This signal coordination system could be extended along NE 76th Street to the west to NE 137th Avenue and along NE 162nd Avenue).

- NE Andresen Road (NR 58th Street to NE 88th Street)³

The unsignalized intersection LOS methodology is not used as criteria to install signals. Underutilized intersections must meet legal signal warrants (volume, safety, and operating criteria) before a signal can be installed. Indiscriminate installations of traffic signals can actually increase accidents as well as add unnecessary expense.

Traffic signal coordination is part of a broader regionally coordinated ITS program called Vancouver Area Smart Trek (VAST). The VAST program was initiated in 1999 through a partnership of transportation agencies including the Southwest Washington Regional Transportation Council, Clark County, the cities of Vancouver and Camas, ODOT, WSDOT and C-TRAN to coordinate, plan and fund ITS projects. ITS uses real time information to integrate and manage road traffic, transit, ramp meters, traffic signals and to manage incidents for more efficient performance. The components of the VAST Program include communications infrastructure, traveler information, incident management, transportation management, transit priority, transit operation and management. The VAST Implementation Plan is a twenty-year prioritized project list. The short term projects include interconnected and adaptive signal control, freeway cameras and roadway detection, variable message signs, a traveler information system, and a traffic management center.

Clark County does not program transportation funds explicitly for TSM projects but is called upon annually by citizens to address perceived transportation deficiencies (e.g., requests for traffic control). Public Works staff is also called upon to submit suggestions for operational improvements to the roadway system based on their experiences on those roads. Many of the projects and actions that result from these suggestions and requests fall into the category of TSM.

LEVEL OF SERVICE

Level of service (LOS) standards represents the minimum performance level desired for transportation facilities and service within the region. They are used as a gauge for evaluating the quality of service on the transportation system and can be described by travel times, travel speeds, freedom to maneuver, traffic interruptions, comfort, convenience and safety. The GMA states that "level-of-service standards shall be established for all arterials and transit routes to serve as a gauge to judge the performance of the system." The GMA directs that these standards should be established locally and coordinated regionally for local arterials and for highways of regional significance. The standards are used to identify deficient facilities and services in the existing transportation system. Highways of statewide significance (RCW 47.06.140) have a level of service set by the state.

LOS Definitions

Level of Service standards can be based on a segment of a roadway or an intersection. The following tables describe level of service standards as defined by the Highway Capacity Manual: Special Report 209, Third Edition (Transportation Research Board, 1998). Clark County does not use this Level of Service definition, but it is shown here for reference. The Average travel speeds are shown with their corresponding level-of-service designation, (e.g. LOS A, B, C, etc) in Table 5.2 – Table 5.5.

³ This system will eventually extend along the Padden Parkway from the SB I-205 off-ramp signal to the west end of the parkway at NE 53rd Avenue/NE 78th Street).

Highway Capacity Manual Definitions of LOS

Table 5.2 Type I Urban Arterials, roadway segment average travel speed

LOS CLASS	A	B	C	D	E	F
AVG TRAVEL SPEED (MPH)	≥42	≥34	≥27	≥21	≥16	< 16

Table 5.3 Type II Urban Arterials, roadway segment average travel speed

LOS CLASS	A	B	C	D	E	F
AVG TRAVEL SPEED (MPH)	≥35	≥28	≥22	≥17	≥13	< 13

Table 5.4 Level of Service Criteria for Signalized Intersections

LOS CLASS	A	B	C	D	E	F
CONTROL DELAY PER VEHICLE (SECONDS)	≤10	> 10 & ≤ 20	> 20 & ≤ 35	> 35 & ≤ 55	> 55 & ≤ 80	> 80

Table 5.5 Level of Service Criteria for Unsignalized Intersections

LOS CLASS	A	B	C	D	E	F
CONTROL DELAY PER VEHICLE (SECONDS)	≤10	> 10 & ≤ 15	> 15 & ≤ 25	> 25 & ≤ 35	> 35 & ≤ 50	> 50

Level of service standards for transit are also required as part of the GMA planning process. The recommended LOS indicators for transit service are shown in Table 5.6.

Table 5.6 C-TRAN LOS Indicators

SERVICE CLASSIFICATION	PLANNING INDICATORS							SUPPORTING FACTORS	
	PERSONS PER SQUARE MILE (POP. + EMP.)	PEAK/ NON-PEAK HEADWAYS	BUS STOP SPACING	ACCESSIBILITY	LOAD FACTOR	TRAVEL TIME RATIO (TRANSIT/AUTO)	SERVICE SPAN (HOURS/DAY, DAYS/WEEK)	EXPECTED MARKET CHARACTERISTICS	OTHER SUPPORTING CHARACTERISTICS
COMMUTER: INTER-STATE	20,000 - 25,000	15/NA	Major P&R lots	Within 5 miles of 80% of pop+emp	1.0	1.75	M-F, peak	Portland employees who live in Washington	Parking mgmt.; HOV priority treatments; P&R spaces
COMMUTER: INTRA-STATE	20,000 - 25,000	15/NA	Major P&R lots	Within 3 miles of 80% of pop+emp	1.0	1.75	M-F, peak	CBD & urban growth centers; employees who live in Washington suburbs	Parking mgmt.; HOV priority treatments; large number of P&R spaces
URBAN CORRIDOR SERVICE	18,000 - 20,000	15/30	1/8 mile	Within 1/4 mile of 75% of rural pop+emp	1.5	2.0	7 days, 12-16 hours/day	Income, special generators, age, high density residential development	Land use zoning compatibility; parking mgmt.
URBAN RESIDENTIAL CONNECTOR SERVICE	12,000 - 18,000	30/60	1/4 mile	Within 1/4 mile of 80% of pop+emp	1.5	2.0	5 days, 12-16 hours/day; limited weekend and evening service	Residential development connecting to major activity centers	Parking mgmt.; zoning; land use compatibility
RURAL	Policy coverage	60/120	Designated pick-up locations	Within 5 miles of 75% of rural pop+emp	1.0	2.0-3.0	M-F, 10-12 hours/day; limited weekend service	Community centers, city halls, post offices	Citizen requests for service
SUBSCRIPTION BUS	30	As needed	NA	NA	1.0	1.15	M-F, peak	Specialized employer needs	Commute trip reduction; parking mgmt.
VANPOOL	8-15	As needed	Not applicable	NA	1.0	1.15	M-F, peak	Specialized employer needs	Commute trip reduction; parking mgmt.
C-VAN (DISABLED)	Policy	As needed	Not applicable	NA	1.0	NA	7 days, 12-16 hours/day	Elderly and handicapped	NA

¹ Accessibility is defined as the percentage of households within walking distance of a transit stop, transit center, or park-and-ride lot.

NA = not available

P&R = park-and-ride

Clark County Level of Service Standards

Clark County level of service standards are applied at both the corridor and intersection level of analysis. The concurrency ordinance identifies specific, designated arterial corridors. Levels of service on these corridors are defined in the concurrency ordinance according to roadway type, location and function.

In addition, intersections within designated corridors will be subject to additional level of service standards. Intersections which exceed these standards may fail independent of an entire corridor.

The level of service on state Highways of Statewide Significance is set by the Washington State Department of Transportation. Level of service for state Highways of Regional Significance are determined by the Southwest Washington Regional Transportation Council.

The result of the Partnership Planning program was to recommend a county-wide roadway LOS system with a hierarchical standard in the rural area and in the Vancouver urban area. A county-wide system allows consistency throughout the region, and also permits a smoother transition during annexations.

The GMA requires that each jurisdiction demonstrate that they can pay for proposed improvement projects from reasonably available funding sources. Deficient roadways are defined as those links or intersections that exceed the adopted LOS standard. Therefore, the adopted LOS standard will determine the current and future improvements projects in the transportation plan. The roadway LOS standard must reflect a reasonable balance between the amount of improvements the County and its cities can afford and the amount of congestion the public can tolerate. The capital facilities plan is comprised of projects necessary to maintain the defined standards through 20 years of growth.

CONCURRENCY

Concurrency Requirements

The concurrency requirement of the GMA mandates that local jurisdictions adopt and enforce ordinances that prohibit development approval if the development causes the LOS on certain transportation facilities to decline below the standards adopted under the comprehensive plan, unless transportation improvements or strategies to accommodate impacts of the development are made concurrent with the development. Concurrent with development means that improvements or strategies are in place at the time of development, or that a financial commitment is in place to complete the improvements or strategies within six years. Clark County will meet these requirements through the adopted concurrency ordinance. The County has adopted a higher three-year funding standard for concurrency.

Concurrency policies are applied to local arterials identified in the capital facilities plan and to highways of regional significance (state-owned facilities not designated as Highways of Statewide Significance). State Highways of Statewide Significance are exempt from local policies.

The concurrency requirements of the GMA closely match the State Environmental Policy Act (SEPA) short-term impact analysis requirements as they both evaluate transportation impacts (namely the roadway and intersection LOS) at the year of opening of the development or a specified short-term analysis year. A State Environmental Policy Act

(SEPA) transportation impact analysis would specify a study area. Concurrency requires an evaluation of area-wide impacts and specific mitigation of those impacts concurrent with the development opening.

Concurrency Management System

The concurrency management system must address concurrency monitoring and concurrency regulation for new development. The County and its cities are responsible for concurrency monitoring and the project applicant is responsible for demonstrating concurrency of the proposed development. The concurrency management system will include all designated corridors along identified arterials and their intersections on the regional system, except for facilities of statewide significance or intersections with facilities of statewide significance. In addition, all intersections of regional significance will also be subject to concurrency testing. Implementation of concurrency monitoring in the County and with local jurisdictions consists of the following strategies:

- LOS is monitored in an established database that includes all intersections within the concurrency management system. Traffic counts will be updated at least every three years. Estimates will be prepared for other years.
- The regional model and other traffic simulation models are used to estimate LOS for roadway segments. A traffic data collection program has been established for roadway segments.
- A tracking system is in place to monitor development applications for "used capacity." Reserved capacity for new development is based on approved applications.
- Incorporate the use of the proactive concurrency tools identified in the TCSP study.

Balancing Concurrency and Growth Management Study and the Transportation Concurrency and Growth Management Study, aka "the TCSP Study", was funded by a Federal Highway Administration grant. The study determined how the transportation concurrency regulations are helping the County meet growth management goals, and to identify appropriate changes to the program. The study focused on two areas of improvements; 1) programmatic improvements to assure that short term transportation system development leads to long term transportation and land use goals of the fifty-year vision; and, 2) policy options to be implemented through the concurrency ordinance to encourage appropriate development patterns.

Relationship to the Comprehensive Plan

The TCSP study is already providing guidance on how transportation modeling, funding, and planning can be improved. This will provide better data and tools with which to proceed in updating the Comprehensive Plan. There may also be new policy directions exploring increased transit use or allocating road capacity to job-creating land uses. These may be implemented in an update to the Concurrency Ordinance.

GOALS AND POLICIES

Transportation policies that seek to provide for the mobility of people and goods must consider increases in travel demand caused by growth in population and employment. The transportation system must be affordable and minimize environmental impacts to maintain the quality of life. A safe, efficient transportation system can work to enhance economic development within a region in conjunction with supportive land use plans.

Community Framework Plan

The Community Framework Plan and the comprehensive plans of the County and its cities envision a shift in emphasis from a transportation system based on private, single-occupant vehicles to one based on alternative, higher-occupancy travel modes such as ridesharing, public transit, and non-polluting alternatives such as walking, bicycling, and telecommuting. This shift occurred due to changes in funding constraints at the federal and state level as well as consideration of the thirteen GMA planning goals contained in 36.70A.020 RCW.

Regional policies are applicable county-wide. Urban policies only apply to areas within adopted urban growth areas (UGAs) and are supplemental to any city policies. Rural policies apply to all areas outside adopted UGAs.

5.0 County-wide Planning Policies

- 5.0.1 Clark County, Metropolitan Planning Organization (MPO) and the Regional Transportation Planning Organization (RTPO), state, bi-state, municipalities, and C-TRAN shall work together to establish a truly regional transportation system which:
- reduces reliance on single occupancy vehicle transportation through development of a balanced transportation system which emphasizes transit, high capacity transit, bicycle and pedestrian improvements, and transportation demand management;
 - encourages energy efficiency;
 - recognizes financial constraints; and,
 - minimizes environmental impacts of the transportation systems development, operation and maintenance.
- 5.0.2 Regional and bi-state transportation facilities shall be planned for within the context of county-wide and bi-state air, land and water resources.
- 5.0.3 The State, MPO/RTPO, County, and the municipalities shall adequately assess the impacts of regional transportation facilities to maximize the benefits to the region and local communities.
- 5.0.4 The State, MPO/RTPO, County, and the municipalities shall strive, through transportation system management strategies, to optimize the use of and maintain existing roads to minimize the construction costs and impact associated with roadway facility expansion.
- 5.0.5 The County, local municipalities and MPO/RTPO shall, to the greatest extent possible, establish consistent roadway standards, level of service standards and methodologies, and functional classification schemes to ensure consistency throughout the region.

- 5.0.6 The County, local municipalities, C-TRAN and MPO/RTPO shall work together with the business community to develop a transportation demand management strategy to meet the goals of state and federal legislation relating to transportation.
- 5.0.7 The State, MPO/RTPO, County, local municipalities and C-TRAN shall work cooperatively to consider the development of transportation corridors for high capacity transit and adjacent land uses that support such facilities.
- 5.0.8 The State, County, MPO/RTPO and local municipalities shall work together to establish a regional transportation system which is planned, balanced and compatible with planned land use densities; these agencies and local municipalities will work together to ensure coordinated transportation and land use planning to achieve adequate mobility and movement of goods and people.
- 5.0.9 The State, County, MPO/RTPO and local municipalities shall work together to establish a regional transportation system which is planned, balanced and compatible with planned land use densities; these agencies and local municipalities will work together to ensure coordinated transportation and land use planning to achieve adequate mobility of goods and people.
- 5.0.10 State or regional facilities that generate substantial travel demand should be sited along or near major transportation and/or public transit corridors.

Regional Implementation Policies

GOAL: Develop a regionally-coordinated transportation system that supports and is consistent with the adopted land use plan.

5.1 Policies

System Development

- 5.1.1 The capital facilities plans, concurrency strategies, and impact fee programs within each UGA should be jointly undertaken with the city and reviewed for regional consistency by the Southwest Washington Regional Transportation Council.
- 5.1.2 Long range land use and transportation plans shall be coordinated with high capacity transit plans.
- 5.1.3 When County Road Projects are designed or transportation improvements are proposed through the development review process, the design of those transportation facilities should be consistent with the current adopted Arterial Atlas, Concurrency Management System and Metropolitan Transportation Plan.
- 5.1.4 LOS standards for the regional arterial system and transit routes should direct growth to urban centers.
- 5.1.5 The County shall provide opportunity for full and fair participation by all communities in the transportation decision-making process.

Implementation Strategies

- Prepare interagency agreements that allow for intergovernmental development review.
- Prepare interagency agreements that provide for the transfer of transportation project management and funding during annexation.
- Coordinate with local municipalities, the Washington State Department of Transportation, adjacent counties and C-TRAN to ensure that minimum roadway and multimodal design standards are consistent and that the design standards provide for all modes and are compatible with adjacent land uses.
- Establish and promote scenic highway corridors.

GOAL: *Develop a multi-modal transportation system.*

5.2 Policies

- 5.2.1 Roadway improvements which provide for additional capacity for the automobile shall also include design accommodations for alternative travel modes.
- 5.2.2 Transit related options, including high capacity transit, shall be encouraged in order to reduce congestion and to improve and maintain air quality.
- 5.2.3 The regional public transportation system shall serve the needs of those with transportation disadvantages in accordance with adopted service standards. The County, C-TRAN and local agencies shall maintain specialized transportation services and facilities to meet the requirements of the Americans with Disabilities Act.
- 5.2.4 The County will support new and improved passenger rail transportation services between Clark County and the Portland metropolitan area, and along the I-5 corridor from Vancouver, BC to Eugene, Oregon.
- 5.2.5 Regional airport planning shall include all affected jurisdictions to provide compatibility with surrounding land uses and to support adequate ground transportation to move people and goods to and from airports.
- 5.2.6 Priority will be given to right-of-way acquisition for the non-motorized routes recommended in the adopted Clark County Trails and Bikeway System Plan. Developer contributions will be required where appropriate.
- 5.2.7 A safe and secure walkway network shall be established within urban areas and rural centers.

Implementation Strategies

- Integrate the regional public transit system with other modes of transportation including auto, rideshare, bicycle, and pedestrian travel.
- Develop infrastructure to interface with inter-city bus, rail, and airline facilities.
- Coordinate with C-TRAN to integrate transit facilities such as transfer centers, bus pullouts, bus shelters, transit information centers and pedestrian connections into the design of all types of development.
- Provide rural collector level connections from rural centers to major multimodal transportation corridors and park-and-ride facilities.
- Support public transportation connections to the rural centers and encourage efficient service between rural cities, towns and centers and urban centers.
- Ensure that alternative transportation modes such as pathways, sidewalks, bus stops, and bike lanes are provided for in subdivisions and other land developments.
- Incorporate adequate checklists into the development and project review process to ensure that accessibility for the elderly and physically challenged is provided, through the construction of curb cuts and ramps, designation of parking spaces, etc.
- Participate in any new airport site selection process led by the Ports, Washington State Department of Transportation Aviation Division or other governmental entity.

GOAL: ***Optimize and preserve the investment in the transportation system.***

5.3 Policies

- 5.3.1 Development projects shall adhere to minimum access spacing standards along arterial and collector streets to preserve the capacity of the transportation system. The County shall also work with the state to ensure that minimum access spacing standards for state highways are maintained.
- 5.3.2 The efficiency of the County's transportation system shall be optimized through the use of Transportation System Management (TSM) strategies such as signal interconnection systems, signal coordination and synchronization, and other signal improvements where appropriate.
- 5.3.3 The County shall extend the life of existing roadways through a timely maintenance and preservation program.

- 5.3.4 The County will support and promote a Transportation Demand Management (TDM) program to reduce the peak hour travel demand from single occupant motor vehicles.
- 5.3.5 The local street system shall be interconnected to eliminate the need to use collector or arterial streets for internal local trips.

Implementation Strategies

- Install medians where feasible on arterial roadways that have inappropriate levels of land access as defined in the County Transportation Standards.
- Discourage the construction of cul-de-sacs and other forms of dead-end streets especially those without pedestrian and bicycle linkages. Require new development to provide for street/pedestrian connectivity where practicable considering environmental and other constraints. Existing unconnected streets should be retrofitted to provide bicycle and pedestrian linkages.
- Preservation program priorities will be established using the Pavement Management System.
- Truck access shall be restricted where gross weight will adversely impact the structural integrity of streets.
- Incorporate ITS where possible within urban growth areas when it is cost-efficient and will result in achieving County transportation goals.
- Require private developments to access collector and local access streets, versus direct access to the arterials. Encourage consolidation of access in developing commercial and high density residential areas through shared use driveways, interconnected parking lots and local access streets that intersect with arterials.
- Use transportation, land use and other measures to maintain or reduce vehicle miles traveled and peak hour trips by single occupant vehicles.
- Maintain the County railroad right-of-way as an industrial-commercial-tourist-recreational resource.

GOAL: *Ensure mobility throughout the transportation system.*

5.4 Policies

- 5.4.1 The County arterial system shall be planned in general conformance with nationally-accepted arterial spacing standards.
- 5.4.2 LOS standards shall be maintained by the appropriate jurisdictions on major freight mobility corridors and in the vicinity of major intermodal facilities to ensure the economic vitality of the region.

- 5.4.3 The Concurrency Management System shall be structured to support growth in areas where transit and alternative travel modes are available and to support the County's economic development strategy.
- 5.4.4 Transportation System Management strategies should be analyzed and employed before adding a general purpose lane to any regional roadway.

Implementation Strategies

- Complete regional corridors and address corridor bottlenecks.
- Allocate or reserve corridor capacity for land uses likely to produce family wage jobs.
- Reduce corridor speed and intersection delay standards where transit is available at 15 minute headways during peak hours.
- Provide for reduced trip rate calculations for transit supportive development.
- Emphasize transit and ridesharing in the design and construction of all transportation facilities through the implementation of transportation system management techniques (signal timing, signal prioritization) and transit-only and high occupancy vehicle lanes.
- Continually test for changes in concurrency due to major development projects.
- Incorporate a "no-build" analysis into the design process for all transportation projects that would add general purpose lanes.

GOAL: Provide a safe transportation system

5.5 Policies

- 5.5.1 High safety standards will be maintained for motorists, pedestrians and bicyclists through the development, design and capital improvement process.
- 5.5.2 Pedestrian safety shall be given priority in the design and capital facilities planning process.
- 5.5.3 Interim safety improvements should be implemented where a significant safety problem has been identified and the financing is not yet available for full improvements in conformance with adopted design standards.
- 5.5.4 Intersections between rail and other transportation modes should be grade separated where possible, except at intermodal transfer points.

Implementation Strategies

- A street maintenance program shall be developed by the County for non-motorized transportation.
- Develop interagency agreements on sharing services to ensure that all shoulders and/or designated bike lanes are maintained in a safe condition.
- Priority shall be given to sidewalk construction projects in transit corridors, near school facilities and major activity centers.

GOAL: *Develop a balanced finance program, which ensures that new development pays the costs of its impacts and that adequate public financing is pursued and available.*

5.6 Policies

- 5.6.1 Priorities for programming and financing transportation improvements that reflect adopted transportation policies shall be adopted in coordination with other jurisdictions and agencies.
- 5.6.2 The prioritization process should be flexible to allow staff to maximize use of outside funding sources.
- 5.6.3 A high priority shall be given to transportation improvements supporting economic development, particularly in high-ranking Focused Public Investment Areas.
- 5.6.4 A portion of road funds shall be dedicated to sidewalk and bicycle facilities consistent with state law.

Implementation Strategies

- Develop and implement a process that ensures efficient management of transportation resources through cooperation in long range planning and project development by federal, state, regional and local jurisdictions.
- Consider implementation of a rural traffic impact fee to offset impacts to urban corridors.
- Cooperatively work with local municipalities and the Regional Transportation Council to develop an integrated Transportation Improvement Program process to maximize the resources for the region.
- Establish funding guidelines and priorities for distribution of transportation funding among competing needs (i.e. economic development, Focused Public Investment Areas, maintenance, preservation, pedestrian safety, mobility, etc.).
- Pursue acquiring advance right-of-way for planned transportation improvements.
- Leverage local funding with innovative and aggressive finance strategies including public/private partnerships, grant development, efficient debt and fee-based funding sources including tolls, congestion pricing and other local options.

STRATEGIES

Financial Analysis

A financial analysis was prepared for the Transportation Element to demonstrate concurrence for the planned roadway improvements and ability of the County to fund those improvements. The GMA requires that there be a balance between proposed land use, resulting traffic forecasts and transportation improvements directed by the LOS standards and available revenues. The GMA requires that public facilities and infrastructure either be in place or included in a six-year improvement program before new development can be approved. The GMA also enables the imposition of impact fees, which are used to finance the shortfall between revenue and the cost of the transportation plan. Clark County adopted an impact fee ordinance in September 1990 and has amended that program in 1994 and 2001 to address increasing improvement costs.

The financial analysis consists of four parts:

- Review existing transportation funding sources and forecast revenues through 2009 (six-year horizon), based on existing trends.
- Review annual expenditures for streets and project expenditures through 2009, based on existing trends.
- Prepare estimated costs for transportation improvement projects.
- Compare revenue and expenditure projections, estimated capital improvement costs and identify potential shortfalls in funding the capital improvement program.

Existing Revenue Sources

Revenues available for financing roadway activities in the County and its cities can be highly variable, depending on the amount of development activity occurring in the County, the number of successful grant applications and other local economic factors. Funds for roadway-related activities come from five general sources:

- general County revenue (e.g., property tax);
- Public Works Trust Fund loans;
- local Improvement District bonds;
- impact Fees adopted by the BOCC in August 2001; and,
- distributions from state and federal sources (e.g., state gas tax allocations).

Funds allocated from General County and city revenues are distributed through the budgetary process. Though these funds are highly dependent on general economic conditions, the budgetary process can soften the impact of fluctuation in the economy and stabilize the year-to-year variation in funds allocated to roadways.

Revenues derived from roadway-related activities and from outside sources usually do not have the benefit of the budgetary process. Budgetary decisions cannot smooth out fluctuations when these revenues are dedicated solely to public works activities by the nature of the fee or by the state and federal government. Impact fees are contingent upon project and development activity and subject to return to the developer if not spent within 6 years. Funds from state and federal sources are restricted by their own budgetary limitation of those jurisdictions. Funds for individual modes have traditionally been allocated by

individual agencies; however federal funding sources now allows some flexibility in funds between roadways, transit, and non-motorized modes.

The variability of the budgetary process, local economic conditions and federal and state sources often cause individual revenue sources to fluctuate widely from year to year. This creates difficulty in tracking definable trends in revenue growth from these sources. Total revenue dedicated to road activities rises and falls with the fluctuation of individual sources, though the amplitude is buffered as some sources fall and others rise, absorbing some of the impact of each. Loans from the Public Works Trust Fund can be used to balance or buffer variations in grant funding.

Revenue Perspective

The revenue estimates for road capital facilities is based on historic trends for several revenue sources including road fund property tax, road fund gas tax, TIF revenues, and annual grant funding. The Revenue Perspective document, which outlines the assumptions used to develop the forecast, is included as a supporting document to this Plan. Table 5.8 presents the 20-year revenue and expenditure forecasts.

Projected Expenditures

Long-range capital improvements to the County's transportation system and their estimated costs are included in the Capital Facilities Plan. These projects would likely be funded through a combination of state sources, the Transportation Improvement Board, and a local match. Local contributions can raise the likelihood of project funding, and typical (although not average) local matches are 20 percent. Note that in order to meet LOS standards and build new roadways consistent with the plan, many of the local streets must be built entirely by developer contributions.

Comparison of Need and Revenues

The summary presented above addresses the revenues required to maintain level of service on local facilities. Improvements to highways of regional significance are addressed in the Metropolitan Transportation Improvement Program reviewed biannually by the Regional Transportation Council and are financially constrained. Improvements to highways of statewide significance are detailed in the Washington State Department of Transportation Highway System Plan which includes a description of both financially constrained and unconstrained planned improvements. Both documents, the regional MTP and the State Highway System Plan are incorporated herein by reference. The needs identified on the local system are consistent with the financially constrained portions of both the state and regional plans, as identified in the Capital Facilities Plan.

Table 5.8 20-Year Projection of Capital Revenues and Expenditures

	Year 2003 Dollars
REVENUE	\$536,177,223
EXPENDITURE	\$536,175,333
BALANCE*	\$1,890

**The identified balance should be considered essentially zero.*